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10/552,410

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Takehito Nakayama

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EXAMINER

MCCLELLAND, KIMBERLY KEIL

ART UNIT

PAPER NUMBER

1791

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/552,410

**Applicant(s)**

NAKAYAMA, TAKEHITO

**Examiner**

KIMBERLY K. MCCLELLAND

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-11, 13 and 22-26 is/are pending in the application.  
4a) Of the above claim(s) 1-7, 12, 14-21, and 27 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 8-11, 13 and 22-2 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 23 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 04/01/08, 04/28/08  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the mechanism for moving the fixing roll and mechanism for moving the sticking roll must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8-10, 13, and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,328,546 to Brady et al. in view of U.S. Patent No. 6,803,320 to Yamamoto, U.S. Patent No. 6,715,524 to Chen et al.
4. With respect to claim 8, Brady et al. discloses a photo resist film application mechanism, including a mounting table (74) having an adherend-mounting surface on which the adherend (72) is mounted; a movable fixing roll (46) for attaching and fixing a long support film to the member, the support film (40) having a sticky and removable surface to which the pre-cut protective tape is attached; the apparatus being constructed such that: the support film (40) is arranged above the mounting table (74) so that the pre-cut protective tape is included in the frame member; a mechanism for moving (48) the fixing roll (46) to press the support film against the mounting table to fix the support film to the member; and the support film (40) is released from the pre-cut protective tape (column 5, lines 3-44; See Figure 5). However, Brady et al. does not specifically disclose a frame member surrounding the adherend-mounting surface of the mounting table or a movable sticking roll for sticking the pre-cut protective pre-cut protective tape to the adherend with a mechanism for moving the sticking roll to press

the support film and the pre-cut protective tape carried by the frame member to stick the pre-cut protective tape to the adherend.

5. Yamamoto discloses a protective pre-cut protective tape applying apparatus, including a frame member (F) surrounding the adherend-mounting surface of the mounting table (column 6, lines 20-30; See Figure 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the frame member of Yamamoto with the mounting table disclosed by Brady et al. The motivation would have been to effectively hold and contain the adherend during the laminating and fixing process.

6. Chen et al. discloses a film removing system, including it is known in the prior art to use a sticking roll (24) for sticking the pre-cut protective tape (3/4) to the adherend (36) and a mechanism for moving the sticking roll (24) to press the support film (1) and the pre-cut protective tape (3/4) to stick the pre-cut protective tape (3/4) to the adherend (36), and further movement of the sticking roll (24) and upon further movement of the sticking roll (24), the support film is released from the protective tape (3/4; See Figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sticking roll taught by Chen et al. with the fixing roll of Brady et al. The motivation would have been to provide sufficient and even pressure during the lamination step.

7. The phrases, "whereby the frame member relieves tension on said support film and the pre-cut protective tape" and "whereby the pre-cut protective tape is stuck to the adherend with reduced residual stress" are considered method steps, and are not found

to be positive recitations of any structural elements of the currently claimed apparatus. The examiner would like to note that while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997); "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). See MPEP § 2114. If the prior art structure is capable of performing the claimed use then it meets the claim. *In re Casey*, 152 USPQ 235, 238 (CCPA 1967); *In re Otto*, 136 USPQ 459 (CCPA 1963). Also, a "whereby" statement does not define the structure of an apparatus. *In re Mason*, 114 USPQ 127. Consequently, the apparatus of the above combination meets applicant's currently claimed invention.

8. As to claim 9, Brady et al. discloses a wind-up roll (42) for the support film (40) aid wind-up roll defining a wind-up direction as a direction the support film moves after the pre-cut protective tape is stuck to the adherend; and a fixed end (41) of the support film located at a feed-out roll; the apparatus being constructed such that: when the fixing roll (46) is moved toward the member while pressing the support film (40) moves between the wind-up roll (42) and the fixed end (41), the pre-cut protective tape

attached to the support film (40) between the wind-up roll (42) and the fixing roll (42) in a direction opposite to the wind-up direction such that the pre-cut protective tape is positioned in the frame of the member (See Figure 5); and the support film (40) is wound on the wind-up roll (42). However, Brady et al. does not specifically disclose a frame member or the fixing roll is presses the support film to fix the support film to the frame member; the sticking roll is presses the support film in the frame of the frame member to stick the pre-cut protective tape to the adherend; and the fixing roll moves away from the frame member.

9. Yamamoto discloses a protective pre-cut protective tape applying apparatus, including a frame member (F) provided to include an adherend-mounting surface of the mounting table (column 6, lines 20-30; See Figure 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the frame member of Yamamoto with the mounting table disclosed by Brady et al. The motivation would have been to effectively hold and contain the adherend during the laminating and fixing process.

10. Chen et al. discloses a film removing system, including the fixing roll (24) is presses the support film (1) to fix the support film to the member; the sticking roll (24) is presses the support film in the member to stick the pre-cut protective tape (3/4) to the adherend (36); and the fixing roll (24) is moved away from the member (12; See Figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sticking roll taught by Chen et al. with the fixing roll of Brady

et al. The motivation would have been to provide sufficient and even pressure during the lamination step.

11. The phrase, "the fixing roll moves away from the frame member and simultaneously the support film is released from the pre-cut protective tape" is considered a method step, and is not found to be a positive recitation of any structural elements of the currently claimed apparatus. The examiner would like to note that while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997); "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). See MPEP § 2114.

12. As to claim 10, Brady et al. discloses clamping the support film across a width, the apparatus being constructed such that: the support film (40) is clamped at longer edge portions thereof with the clamping member (84) and the pre-cut protective tape is arranged such that the pre-cut protective tape is positioned in the member (86; column 6, lines 3-10; See Figure 6). However, Brady et al. does not specifically disclose a frame



member or the sticking roll is caused to press the support film in the frame of the frame member to stick the pre-cut protective tape to the adherend.

13. Yamamoto discloses a protective pre-cut protective tape applying apparatus, including a frame member (F) provided to include an adherend-mounting surface of the mounting table (column 6, lines 20-30; See Figure 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the frame member of Yamamoto with the mounting table disclosed by Brady et al. The motivation would have been to effectively hold and contain the adherend during the laminating and fixing process.

14. Chen et al. discloses a film removing system, including the sticking roll (24) is caused to press the support film (1) to stick the pre-cut protective tape (3/4) to the adherend (36; See Figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sticking roll taught by Chen et al. with the fixing roll of Brady et al. The motivation would have been to provide sufficient and even pressure during the lamination step.

15. The phrase, "whereby, when the fixing roll presses the support film to fix the support film to the frame member, and the sticking roll presses the support film fixed to the frame member to stick the pre-cut protective tape to the adherend, the support film is released from the pre-cut protective tape by relative movement of the clamping member." is considered a method step, and is not found to be a positive recitation of any structural elements of the currently claimed apparatus. The examiner would like to note that while features of an apparatus may be recited either structurally or

functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In *re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997); "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). See MPEP § 2114. Also, a "whereby" statement does not define the structure of an apparatus. *In re Mason*, 114 USPQ 127.

16. As to claims 13 and 24-25, expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). However, Brady discloses a semiconductor wafer (72).

17. Claims 11, 22-23, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,328,546 to Brady et al. in view of U.S. Patent No. 6,803,320 to Yamamoto and U.S. Patent No. 6,715,524 to Chen et al. as applied to claims 8-10, 13, and 24-25 above, and further in view of U.S. Patent No. 6,080,263 to Saito et al.

18. With respect to claims 11 and 22-23, Brady et al. discloses a photo resist film application mechanism, including accurately positioning the film over the semiconductor wafer by controlling the transport web (column 2, lines 34-56). However, Brady et al. does not specifically disclose aligning means for relatively moving the frame member to which the support film is attached and the mounting table on which the adherend is mounted to permit alignment of the pre-cut protective tape in the frame of the frame member with the adherend.

19. Saito et al. discloses an apparatus for applying protective film to a semiconductor wafer, including aligning means for relatively moving the frame member to which the support film is attached and the mounting table on which the adherend is mounted to permit alignment of the pre-cut protective tape in the frame of the frame member with the adherend (See Abstract). It would have been obvious to one of ordinary skill in the arts at the time the invention was made to combine the aligning means taught by Saito et al. with the mounting table disclosed by Brady et al. The motivation would have been to accurately place the protective film during the lamination steps and ensure effective coverage of the wafer.

20. As to claim 26, expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). However, Brady discloses a semiconductor wafer (72) and a protective pre-cut protective tape (16).

***Response to Arguments***

21. Applicant's arguments filed March 3<sup>rd</sup>, 2008 have been fully considered but they are not persuasive.

22. The current claims language does not positively recite either the pre-cut protective tape or the adherend/wafer. As such, these limitations are not given weight, because they are drawn to expressions relating the apparatus to contents thereof during an intended operation Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). An example of a positive recitation for pre-cut protective tape might be: "A system including a pre-cut protective tape". Applicant is encouraged to positively recite both the pre-cut protective tape and the adherend, if these limitations are believed to impart patentability.

23. As to applicant's argument that Brady does not teach a laminating roller that attaches and fixes a support film to a frame member, examiner agrees. However, Yamamoto is relied upon to teach a frame member on the mounting table, not Brady. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Also, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Secondly, the current claims are apparatus claims, not method claims. The limitation of a roller that "attaches and fixes a support film to a frame member" is a functional limitation. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). The combination of the frame taught by Yamamoto with the apparatus of Brady is capable of performing the functions recited by applicant in the current claims. Consequently, the rejection 8-10, 13, 24 and 25 over Brady in view of various secondary references is maintained.

24. With respect to applicant's argument that Yamamoto has a different intended purpose for use of a frame member (remarks, page 15, 1st paragraph), it is well settled that the intended use of a claimed apparatus is not germane to the issue of the patentability of the claimed structure. If the prior art structure is capable of performing the claimed use then it meets the claim. *In re Casey*, 152 USPQ 235, 238 (CCPA 1967); *In re Otto*, 136 USPQ 459 (CCPA 1963). Applicant has not provided any structural differences between the prior art apparatus and the currently claimed invention.

25. Applicant further argues that because Brady does not disclose a frame, and Yamamoto does not teach fixing the support film to the frame, then the combination is not capable of performing this function. Examine disagrees. The frame member (f) of Yamamoto has a greater height than the adherend on the mounting table. Placing the frame of Yamamoto in the apparatus of Brady would result in a frame surrounding the adherend on the mounting table, with a height greater than the adherend. During

operation of the device, as shown by Brady, the laminating roller moves horizontally across the mounting table. This movement would inherently result in the supporting film contacting and bonding to the frame member, because of the difference in height between the frame and adherend as shown in Yamamoto. Therefore, the functional language included by applicant in the current claim language of independent claim 8 requiring the fixing roller to "attach and fix a support film to the frame member" is meant by the combination of the apparatus of Brady combined with the frame taught by Yamamoto.

26. With respect to applicant's arguments against Chen, it is noted Yamamoto, not Chen, is relied upon to teach a frame member. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

27. Applicant also argues that one of ordinary skill in the art would not be motivated to combine the sticking roll (24) of Chen with the apparatus of Brady, because the sticking roll of Chen performs the same function as the fixing roll (46) of Brady. Examiner notes the sticking roll of Chen functions to further press a previously placed support film onto an adherend. This function is different than that of the fixing roll of Brady, which places and attaches the support film to the adherend. Therefore, the combination of the sticking roll of Chen with the apparatus and fixing roll of Brady would not be redundant, because the sticking roll of Chen performs a different function than

the fixing roll of Brady. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sticking roll taught by Chen et al. with the fixing roll of Brady et al. The motivation would have been to provide sufficient and even pressure during the lamination step.

28. Applicant's remaining arguments are based on the dependency of claims 9-11, 13, and 22-26 on independent claim 8. These arguments are not persuasive for the reasons stated above.

29. Consequently, the rejections of claims 8-11, 13, and 22-26 are maintained under 35 U.S.C. 103 (a) over Brady in view of various secondary references.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIMBERLY K. MCCLELLAND whose telephone number is (571)272-2372. The examiner can normally be reached on 8:00 a.m.-5 p.m. Mon-Thr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip C. Tucker can be reached on (571)272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. K. M./  
Examiner, Art Unit 1791

KKM

/Philip C Tucker/  
Supervisory Patent Examiner, Art Unit 1791